

Appl. No. 10/710,673
Amdt. dated January 19, 2006
Reply to Office action of October 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A booster comprising:

- 5 a boosting circuit for boosting an input voltage to a predetermined output voltage;
 an oscillator for generating oscillating signals when the boosting circuit boosts the
 input voltage; ~~and~~
 a voltage detector electrically connected to the boosting circuit for ~~stopping the~~
 ~~boosting circuit from boosting the input voltage~~ detecting when the output
10 voltage of the boosting circuit reaches a predetermined voltage; ~~and~~
 an AND gate, wherein a first input end of the AND gate is electrically connected to
 an output of the oscillator, and a second input end of the AND gate is
 electrically connected to an output of the voltage detector for preventing the
 oscillating signals produced by the oscillator from being provided to the
15 boosting circuit when the output voltage of the boosting circuit reaches the
 predetermined voltage.

2 (cancelled).

- 20 3 (currently amended): The booster of ~~claim 2~~ claim 1 wherein the oscillator is a ring
 oscillator.

- 4 (currently amended): The booster of ~~claim 2~~ claim 1 wherein the oscillator further
 comprises a frequency control circuit for adjusting the frequency of the oscillating
25 signal generated by the oscillator.

 5 (original): The booster of claim 1 wherein the input voltage is provided by a fuel cell.

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6 (currently amended): The booster of claim 1 wherein the voltage detector comprises a diode, a first resistor, a second resistor, a third resistor, and a bipolar junction transistor (BJT); wherein an emitter of the BJT is grounded, a collector of the BJT is electrically connected to a first end of the first resistor, a base of the BJT is electrically connected to first ends of the second and the third resistors, a second end of the second resistor is grounded, a second end of the third resistor is electrically connected to a negative pole of the diode, and a positive pole of the diode is electrically connected to both a second end of the first resistor and the output voltage of the boosting circuit.

7 (original): The booster of claim 6 further comprising a pair of series-connected inverters electrically connected to the collector of the BJT for adjusting a logic level.

8 (original): The booster of claim 6 wherein the second resistor or the third resistor is a variable resistor.

9 (original): The booster of claim 6 wherein the diode is a zener diode.

10 (currently amended): A method of boosting battery output, the battery electrically connected to a booster comprising a boosting circuit, an oscillator, and a voltage detector, the method comprising:
(a) detecting an output voltage of the booster with the voltage detector;
providing an AND gate having , wherein a first input end of the AND gate is electrically connected to an output of the oscillator, and a second input end of the AND gate is electrically connected to an output of the voltage detector;
(b) if when the output voltage is lower than a predetermined voltage, with the oscillator generating a periodic pulse signal for controlling a transistor of the

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booster to execute an on/off operation for adjusting the output voltage; and
(e) if when the output voltage reaches the predetermined voltage value, with the
voltage detector generating a voltage signal whose logic level is zero for turning
off the transistor.

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11 (cancelled).

12 (currently amended): The method of ~~claim 11~~ claim 10 wherein the oscillator further
comprises a frequency control circuit for adjusting the frequency of the oscillating
10 signal generated by the oscillator.

13 (original): The method of claim 10 wherein the battery is a fuel cell.

14 (currently amended): The method of claim 10 wherein the voltage detector comprises a
15 diode, a first resistor, a second resistor, a third resistor, and a bipolar junction
transistor (BJT); wherein an emitter of the BJT is grounded, a collector of the BJT is
electrically connected to a first end of the first resistor, a base of the BJT is
electrically connected to first ends of the second and the third resistors, a second end
of the second resistor is grounded, a second end of the third resistor is electrically
20 connected to a negative pole of the diode, and a positive pole of the diode is
electrically connected to both a second end of the first resistor and the output
voltage of the boosting circuit.

15 (original): The method of claim 14 wherein the voltage detector further comprises a
25 pair of series-connected inverters that are electrically connected to the collector of
the BJT for adjusting a logic level.

16 (original): The method of claim 14 wherein the second resistor or the third resistor is a

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variable resistor.

17 (original): The method of claim 14 wherein the diode is a zener diode.

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